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How to cite:

Rosewell, Jon; Kear, Karen; Williams, Keith; Rodrigo, Covadonga and Sánchez-Elvira, Angeles (2017). E-xcellence methodology: lessons learned over ten years of development and implementation. In: The Online, Open and Flexible Higher Education Conference: Higher Education for the Future: Accelerating and Strengthening Innovation, 25-27 Oct 2017, The Open University, Milton Keynes.

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Version: Accepted Manuscript

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E-xcellence methodology: lessons learned over ten years of development and implementation

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Abstract

The E-xcellence methodology for quality assurance of e-learning in higher education has developed into a flexible and effective approach to quality assurance. It has proved suitable to meet the needs of a diverse range of institutions and national quality assurance regimes, and is applicable to both distance and blended modes. The E-xcellence resources (<http://e-xcellencelabel.eadtu.eu/>) include a quality manual, guidance for institutions and assessors, and an online Quick Scan self-evaluation tool. The manual was updated in 2012 and 2016 to reflect evolving changes in practice.

The E-xcellence methodology provides 35 benchmark statements, grouped under six headings: Strategic Management, Curriculum Design, Course Design, Course Delivery, Staff Support and Student Support. Higher education institutions self-assess their capabilities against each of the benchmark statements on a four-point scale. They also prepare a roadmap of future actions which can be mapped to benchmark statements. A visit by external reviewers enriches and complements the self-assessment.

This study is based on an analysis of E-xcellence self-evaluations and roadmaps at twenty higher education institutions. Tabulating those benchmarks that are rated as not yet adequate, and those which attract the most planned actions, highlights the aspects that institutions have found most challenging as they develop and implement online and blended learning programmes.

This profiling exercise indicates that institutions regard issues of strategy, curriculum design and staff support as presenting the greatest challenges. Particular problems include staff workload and developing an online

academic community for students. In contrast, the provision of reliable IT systems and hardware is unproblematic.

Keywords: quality assurance, quality enhancement, e-learning, online learning, blended learning

1. Introduction

E-learning is increasingly important in Higher Education, but concerns are often raised about its quality (Vlachopoulos, 2016). An effective quality enhancement approach for institutions with e-learning or blended learning offerings is to review and evaluate their e-learning provision, taking into account all the relevant aspects, in order to facilitate improvement. The E-xcellence methodology (see <http://e-xcellencelabel.eadtu.eu/>; Kear et al., 2016; Kear, Williams & Rosewell, 2014) is a proven way to carry out such a review, supported by resources and external evaluators who can advise and offer their expertise.

The E-xcellence approach focuses specifically on e-learning and blended learning (rather than other aspects of educational provision) and is intended to complement the normal institutional or national quality assurance processes, which may not be well suited to e-learning provision. It is a benchmarking approach (Ossiannilsson & Landgren, 2012) seeking to reflect best practice in e-learning. As is recommended by Jung & Latchem (2012, pp. 268-9), it takes a quality enhancement stance that aims for continuous improvement, rather than a conformance stance. It emphasises self-assessment, based on a set of benchmark statements, encouraging an institution to take stock of its current practice and to plan for improvement. Feedback from participants in E-xcellence reviews highlights the value obtained by sharing of views and experiences and the opportunities for dialogue between varied stakeholders. An 'E-xcellence Associates in Quality' label can be awarded after external review.

E-xcellence reviews have been carried out at a number of European higher education institutions (HEIs) over the last ten years. These reviews, taken together, have revealed aspects that are particularly challenging for institutions in their adoption of e-learning. This paper, after describing the E-xcellence methodology, presents an analysis of the outputs from nineteen E-xcellence reviews. This analysis was carried out to address the following question:

Which aspects of e-learning or blended learning have posed the most significant challenges to HEIs?

2. Background and context

The E-xcellence methodology has been developed over a number of years in successive EU-funded projects and subsequent initiatives led by the European Association of Distance Teaching Universities (EADTU):

- *E-xcellence* 2005-06: Development and trialling of performance criteria, an E-xcellence manual and the methodology
- *E-xcellence Plus* 2008-09: Dissemination to institutions and to QA agencies in 9 European countries
- *E-xcellence NEXT* 2011-12: Continued dissemination and updating of performance criteria and resources; 2nd edition of the manual
- 2016: 3rd edition of the manual (online only).

Revisions have been made to the E-xcellence approach and resources to take into account the changing landscape of e-learning, and to respond to feedback from participants in E-xcellence reviews. Resources to support the current version can be found on the website <http://e-xcellencelabel.eadtu.eu/>.

At the core of E-xcellence is a set of 35 benchmark statements that capture best practice in e-learning. These benchmarks are supplemented by the E-xcellence manual (Kear, et al., 2016), which provides guidance on the topics that underlie the benchmark statements. It is intended to focus discussion during self-evaluation and review, and to act as an introduction to the key issues an institution faces when introducing e-learning.

The manual includes a number of detailed performance indicators that can be used to provide evidence of meeting the benchmarks. The indicators are not intended to be used as a conformance checklist. Instead they suggest the types of evidence that an institution could look for in its current practice to judge how well it meets particular benchmarks, and what actions it might take to improve quality. Indicators are labelled at two levels: one which would be expected from most institutions, and one expected only of those institutions working at an 'excellent' level.

The benchmarks are organised into six topic areas, reflected by chapters in the manual. These cover:

- *Strategic Management*: a high level view of how the institution plans its e-learning
- *Curriculum Design*: how e-learning is used across a whole programme of study
- *Course Design*: how e-learning is used in the design of individual courses
- *Course Delivery*: the technical and practical aspects of e-learning delivery
- *Staff Support*: the support and training provided to staff
- *Student Support*: the support, information and guidance provided to students.

Sample benchmarks are given in Table 1; the full list of benchmarks can be found in the current E-xcellence manual at <http://e-xcellencelabel.eadtu.eu/tools/manual>.

Table 1: Sample E-xcellence benchmarks

Topic area	Sample Benchmark
<i>Strategic Management</i> (benchmarks 1-5)	1. The institution has an e-learning strategy that is widely understood and integrated into the overall strategies for institutional development and quality improvement. E-learning policies conform to legal and ethical frameworks.
<i>Curriculum Design</i> (benchmarks 6-9)	9. Curricula are designed to enable participation in academic communities via social media tools. These online communities provide opportunities for collaborative learning, contact with external professionals and involvement in research and professional activities.
<i>Course Design</i> (benchmarks 10-18)	14. E-learning materials have sufficient interactivity (student-to-content, student-to-student and student-to-teacher) to encourage active engagement and enable students to test their knowledge, understanding and skills.
<i>Course Delivery</i> (benchmarks 19-24)	20. The systems for communication and storage of data are secure, reliable and assure appropriate levels of privacy. Measures are in place for system recovery in the event of failure or breakdown.
<i>Staff Support</i> (benchmarks 25-30)	29. The institution ensures that issues of staff workload, and any other implications of staff participation in e-learning activities, are taken into account when managing courses or programmes.
<i>Student Support</i> (benchmarks 31-35)	32. Students are provided with guidelines stating their rights, roles and responsibilities and those of their institution. Guidelines of specific relevance to e-learning include provision of hardware, information on accessibility and expected participation in collaborative activities.

An 'E-xcellence Associates in Quality' label can be awarded as recognition that an institution has carried out a comprehensive review of its e-learning performance, based on the E-xcellence benchmarks, and has an agreed action plan for further quality enhancement. To achieve the label, an institution will host a review by two or three E-xcellence external assessors. The outcome of this review will be an agreed report and action plan, and a recommendation to the board of EADTU whether or not the label should be awarded. The label should be renewed every five years. The label is awarded for specific programmes of study since e-learning is often introduced for certain programmes rather than on a whole-institution basis.

To prepare for the review, the institution will carry out a thorough self-assessment of its e-learning/blended learning provision against the E-xcellence benchmarks. An internal review team will be assembled that includes a wide range of stakeholders and representation from different functional areas involved with e-learning: for example, academics, IT specialists, Student Support staff and students. The team should include senior managers as well as practitioners.

The internal self-assessment is often started by using either the online or paper-based 'Quick Scan' tool, which asks for a judgement on how well each benchmark is achieved on a five-point scale. The outcome of discussions during the self-assessment should be a consensus judgement on each benchmark, together with evidence to support that judgement. Standard templates for documentation are provided. Once completed, the self-assessment document is shared with the external reviewers.

The external review takes the internal self-assessment document as a starting point for discussion. Review discussions are typically held over a two-day period during which the external reviewers will meet with the internal review team. The review is usually carried out as a face-to-face event but can also be conducted online. It provides an opportunity to discuss issues, share ideas for good practice, and discuss a draft action plan. Following the review, the internal team finalise their action plan, and the external review team then compose their report.

E-xcellence takes a flexible approach to assuring quality. Firstly, it offers a benchmarking approach rather than a checklist or scorecard approach. This allows individual institutions to offer evidence and examples that derive from their particular context as support for their claim to achieve any benchmark. E-xcellence has been used by a wide range of HEIs that could be characterised variously as fully online, 'traditional' open distance learning or campus-based with blended learning, and including institutions of widely different size. Secondly, the benchmarks are phrased in high-level terms, rather than being tightly prescriptive; this has allowed the benchmarks to remain valid even as technology and pedagogy has evolved.

Further flexibility arises because the E-xcellence materials can be used at a variety of levels of engagement, from formal to informal. We have discussed above the formal review process for the E-xcellence label, but the E-xcellence materials – for example the current edition of the benchmarks and manual – are freely available (with CC-BY-NC-ND licence) on the website (<http://e-xcellencelabel.eadtu.eu/>) for any group or individual to use. The website also hosts an interactive version of the Quick Scan tool which offers immediate feedback on each benchmark judgement. This means that an institution or an individual can carry out an informal self-evaluation, leading to insight into the strengths and weaknesses of a programme of e-learning and, in turn, to a plan of action for enhancement. This can be of value even if it does not proceed to a full, formal label process. Furthermore, the E-xcellence framework can be incorporated, either fully or in part, into the formal quality processes of an institution. The E-xcellence manual acts as a concise introduction to the key issues an institution faces when introducing e-learning, drawing from the experience of practitioners.

A final illustration of the flexibility of E-xcellence has been its adaptation into the OpenupEd quality label for MOOCs (Rosewell & Jansen, 2014; Jansen, Rosewell & Kear, 2017). OpenupEd (<http://openuped.eu/>) offers a self-assessment, review and label modelled on E-xcellence. Benchmarks, although aligned to E-xcellence, are tailored for MOOCs, and institutional level concerns are separated from those specific to a single MOOC. OpenupEd can therefore offer a lightweight consideration of 11 benchmarks at the level of an individual MOOC while retaining the holistic approach of E-xcellence through a periodic review of 21 benchmarks at institutional level.

3. Method

We analysed self-assessments, action plans and final reports from nineteen reviews that led to the award of the E-xcellence label in the period 2009-2016.

Since the E-xcellence framework has been updated several times, the content and number of benchmarks has changed somewhat. In this paper, all benchmarks are referred to the current, third edition benchmarks (Kear, et al., 2016). In most cases there is a close correspondence between benchmarks of different editions, although there have been additions and some cases where benchmarks have been divided or merged. In this paper we give benchmarks short titles; the full benchmarks can be found in the E-xcellence manual at <http://e-xcellencelabel.eadtu.eu/tools/manual>.

First we consider institutional self-assessments. For each benchmark, we counted the number of institutional reviews where that benchmark was judged at a low level. Early reviews judged benchmarks on a four-point scale running from 'Not achieved' to 'Fully achieved'; from 2013 a five-point scale has been used running from 'Not adequate in the majority of aspects' to 'Excellent in all aspects'. We considered the lowest two categories of both scales to mean the benchmark was 'problematic', and we use this combined count in further analysis.

Next we consider action plans. For each benchmark we counted the number of institutional 'roadmaps' (action plans) that listed a planned action for that benchmark. Although most action plans gave some indication of timescale for planned actions, for analysis we have counted all actions regardless of timescale.

We also obtained a summary of the above counts by grouping them into the six broad topic areas used in the E-xcellence framework. Since the number of benchmarks in each topic area varies, we have scaled the counts by the number of benchmarks in each topic area to produce a 'relative count'.

4. Findings

In this section we present the quantitative analyses of data from the institutions' self-assessments and from their roadmaps for improvement. We also compare these two sets of data.

Figure 1 shows the results from the self-assessments, grouped into the six areas that form the E-xcellence framework. This shows that the areas which are most commonly judged as problematic are *Strategic Management*, *Curriculum Design* and *Staff Support*. *Student Support* is much less commonly judged as problematic.

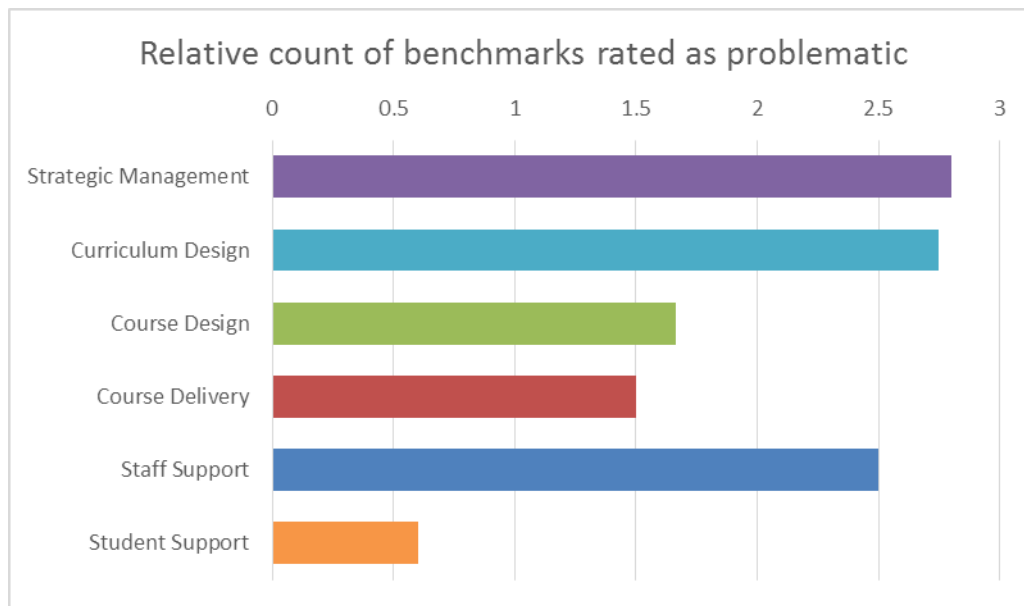


Figure 1: Relative count of benchmarks rated as problematic in institutional self-assessments, grouped into the six areas of the E-xcellence framework. The raw count is scaled by the total number of benchmarks in each area.

There is variation in the assessments for individual benchmarks within each of these broad areas. Looking at benchmarks individually (Figure 2) shows that *Workload management* (Benchmark 29, in *Staff Support*) is the benchmark most commonly rated as problematic. Note that this refers to managing the workload of staff, not students.

The development of *Academic communities* (Benchmark 9, in *Curriculum Design*) is the next most problematic, and this same concern may also be reflected in self-assessments for *Social media* (Benchmark 33, in *Student Support*). The issue of an *E-learning strategy* (Benchmark 1, *Strategic Management*) is also highlighted as problematic.

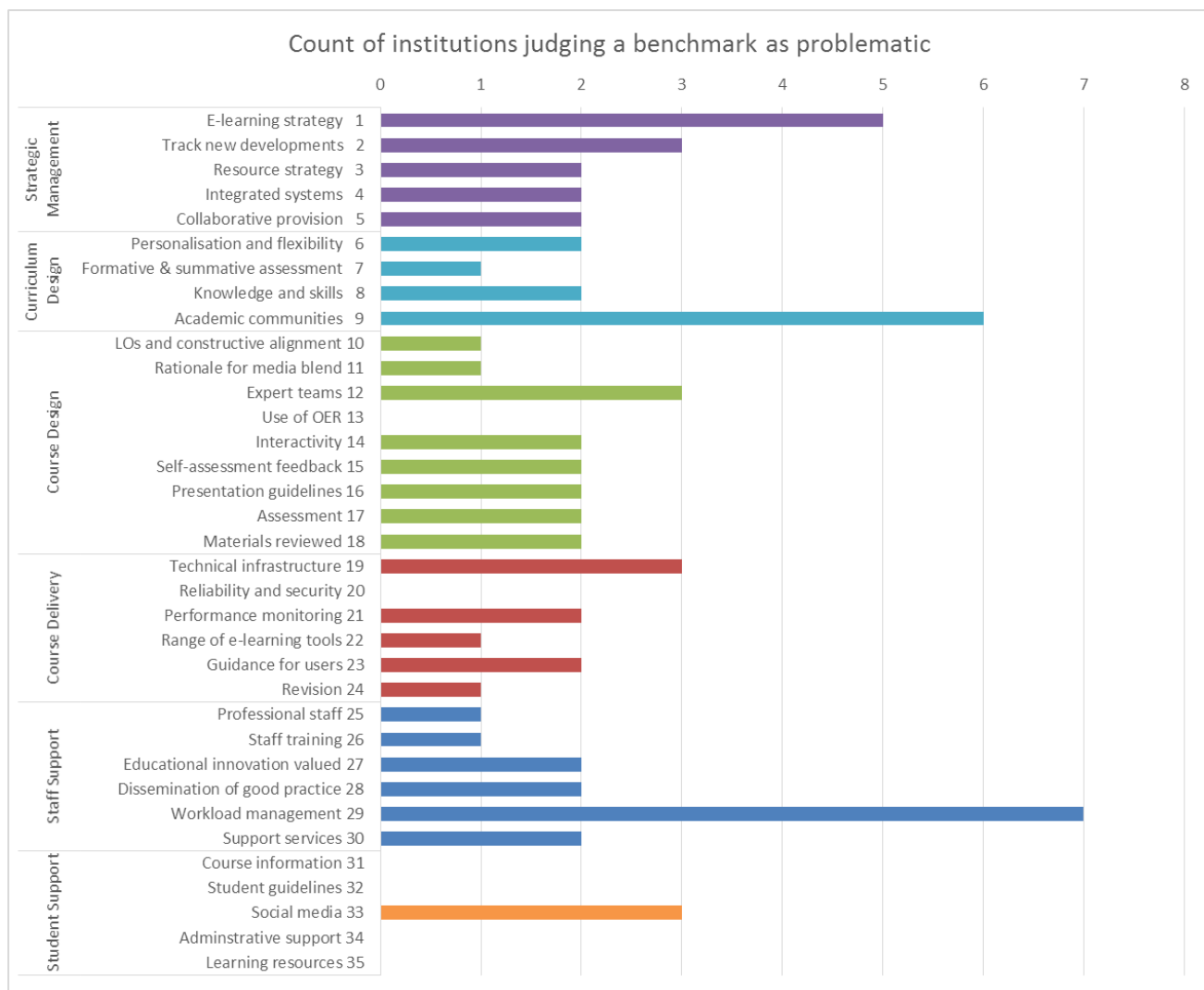


Figure 2: Count of individual benchmarks rated as problematic in institutional self-assessments

Some benchmarks are shown with zero scores in Figure 2, meaning that all institutions viewed them as unproblematic (that is, already largely or fully achieved, or already adequate or excellent). For example, *Reliability and security* (Benchmark 20, in *Course Delivery*) was not rated as problematic by any institution, although other benchmarks in this area, such as *Technical infrastructure* (Benchmark 19) and *Performance monitoring* (Benchmark 21) received non-zero scores. Note that *Use of OER* (Benchmark 13, in *Course Design*) has a zero score; this benchmark was added to the 2nd edition and had no counterpart in the initial version of E-xcellence.

Notably, all benchmarks in the area of *Student Support*, with the exception of *Social media* (Benchmark 33), were judged unproblematic. These are *Course information* (Benchmark 31), *Student guidelines* (Benchmark 32), *Administrative support* (Benchmark 34) and *Learning resources* (Benchmark 35).

We now move on to consider the data from the institutions' roadmaps for improvement. Figure 3 shows the overall results from the roadmaps; these have again been grouped into the six areas of the E-xcellence framework. Figure 3 shows that the planned actions were most commonly in *Strategic Management*, *Curriculum Design* and *Staff Support*.

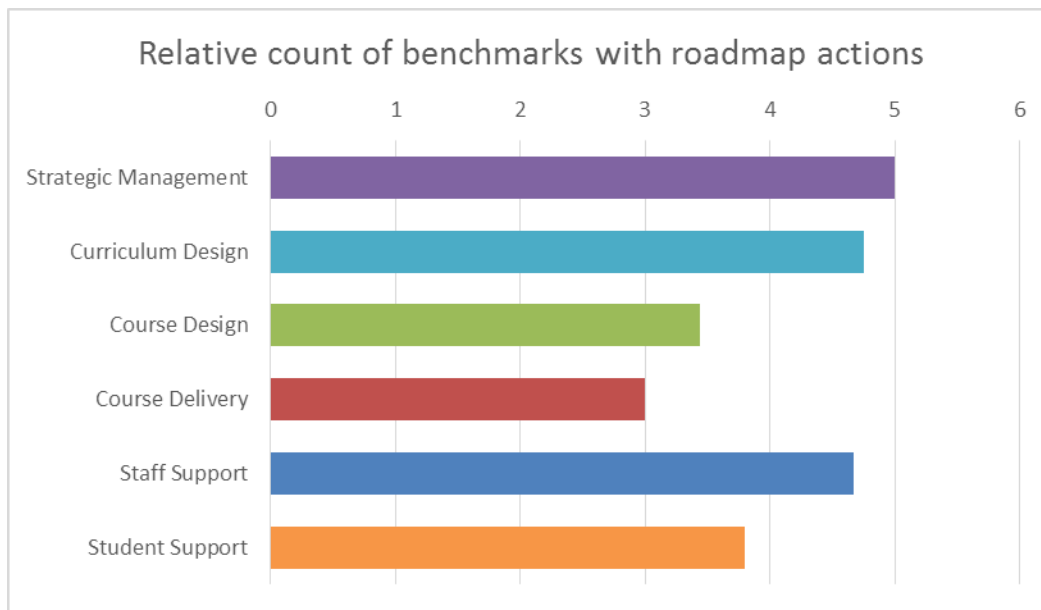


Figure 3: Relative count of actions for benchmarks noted in institutional roadmaps, grouped into the six areas of the E-xcellence framework. The raw count is scaled by the total number of benchmarks in each area.

The pattern for roadmap actions (Figure 3) closely reflects the pattern that emerged from the self-assessments (Figure 1), except that a relatively high number of actions were noted for benchmarks in *Student Support*, even though this area had rarely been judged problematic in the self-assessments. This issue will be discussed later in the paper.

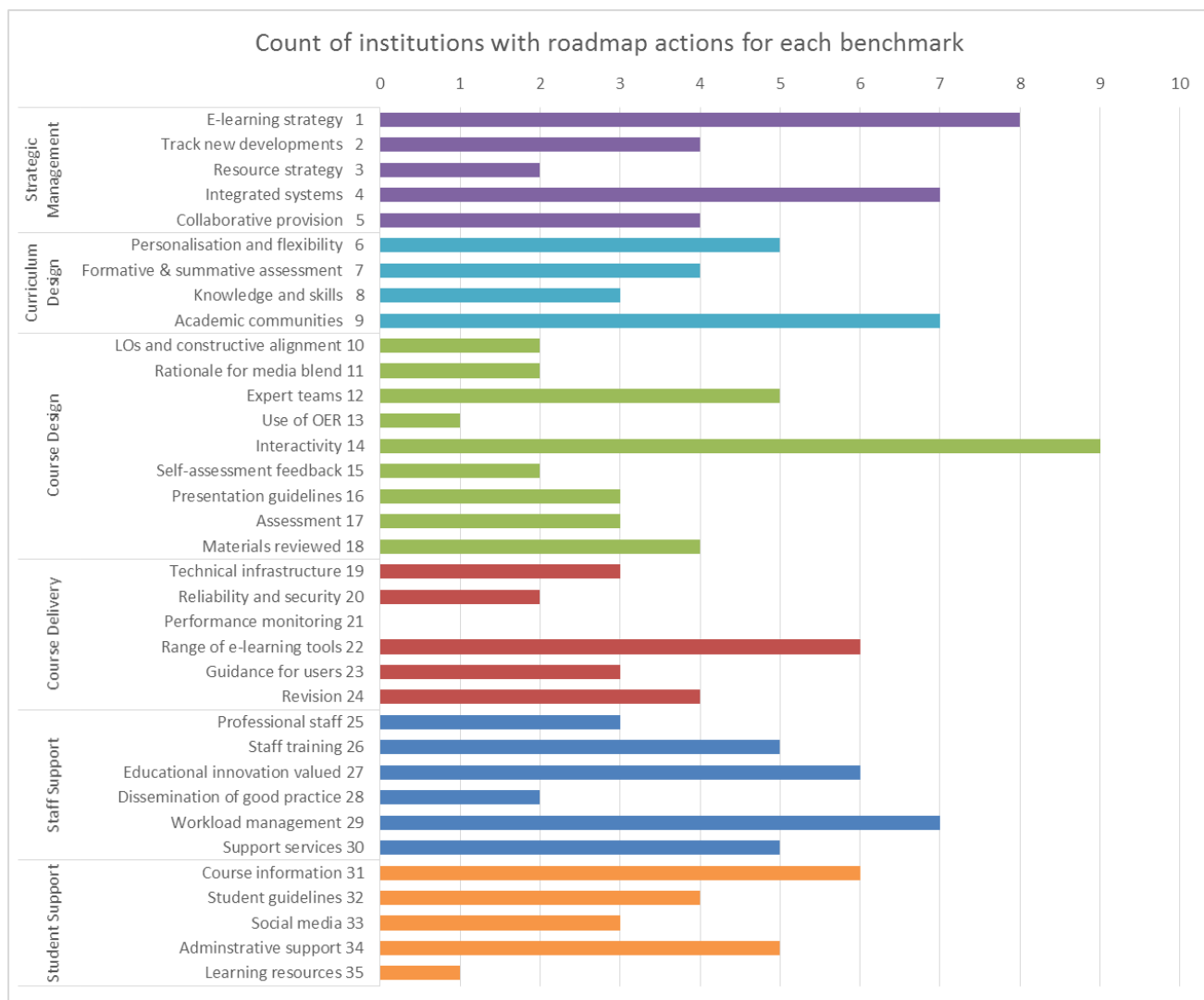


Figure 4: Count of actions for individual benchmarks noted in institutional roadmaps

At the level of individual benchmarks (Figure 4), there are both similarities and differences to the pattern shown in the self-assessments.

Some benchmarks feature similarly: benchmarks associated with *E-learning strategy* (Benchmark 1, in *Strategic Management*), *Workload management* (Benchmark 29, in *Staff Support*) and *Academic communities* (Benchmark 9, in *Curriculum Design*) have high numbers of actions in roadmaps, as well as appearing problematic from the self-assessment scores.

However, other benchmarks differ on the two measures. The largest number of roadmap actions was for *Interactivity* (Benchmark 14, in *Course Design*), although this benchmark was not commonly judged problematic in the self-assessments (see Figure 2). In the area of *Strategic Management*, *Integrated systems* (Benchmark 4) has a relatively high number of actions, although it was not commonly judged problematic in self-assessments. In the area of *Student Support*, there are relatively high numbers of actions recorded for *Course information* (Benchmark 31), *Student guidelines* (Benchmark 32) and *Administrative support* (Benchmark 34), even though these benchmarks were never counted as problematic in the self-assessments. On the other hand, *Social media* (Benchmark 33) stood out as problematic in self-assessments, but does not have a particularly high number of actions in roadmaps.

5. Discussion

The E-xcellence framework and process was designed as a method for assessing and improving quality. Because of its use of specific benchmarks, grouped in a clear framework, it enables particular issues related to quality to be identified and addressed. When this analysis is carried out across a set of HEIs, an overarching view of the issues can be obtained in order to identify which aspects of e-learning and blended learning are particularly challenging to HEIs and, in contrast, which aspects have become successful 'business as usual'.

This paper has presented findings from an analysis of E-xcellence reviews at several HEIs across and beyond Europe. Based on data from the institutions' self-assessments and roadmaps, the analysis has identified several key issues that institutions find problematic when implementing e-learning or blended learning. These are: strategy; staff workload; academic community; and interactivity. Two of these (strategy and staff workload) are institutional; the other two (academic community and interactivity) are more student-facing. The analysis has also shown that the more practical and technical aspects, such as providing information for students, and technical infrastructure, are relatively unproblematic. It is encouraging that these 'building blocks' of quality e-learning are in place.

Looking in more detail at the results of the analysis, and particularly comparing the two sources of data (self-assessments and roadmaps), raises further considerations about the issues identified and the E-xcellence process itself. One might assume that benchmarks that are frequently scored as problematic would lead to planned actions listed in the roadmap, and conversely that benchmarks that were scored as unproblematic would have few or no actions planned against them. To a large extent this is the pattern seen. For example, *E-learning strategy* (Benchmark 1, in *Strategic Management*), *Workload management* (Benchmark 29, in *Staff Support*) and *Academic communities* (Benchmark 9, in *Curriculum Design*) are highlighted by being frequently scored as problematic in self-assessments and also by having high numbers of actions in roadmaps.

In other areas however, the two views of the data are not consistent. Most notably, there are relatively high numbers of roadmap actions recorded in the *Student Support* area: for *Course information* (Benchmark 31), *Student guidelines* (Benchmark 32) and *Administrative support* (Benchmark 34) even though these benchmarks had not been scored as problematic in the self-assessments. There are a large number of actions noted for *Interactivity* (Benchmark 14, in *Curriculum Design*), which is a benchmark that is not highlighted as problematic in self-assessments.

It may be that these inconsistencies are a by-product of the way institutions complete an E-xcellence review. The institution may find it relatively straightforward to fill in a roadmap with actions which are already planned or underway. These may be responses to issues that are well-known and have had some initial work done on them, and are thus not scored as problematic in self-assessments, even though further actions are planned. It may also be that practitioners find it relatively easy to do 'more of the same' and more difficult to engage with new challenges. For example, the provision of *Course information* (Benchmark 31, *Student Support*) and *Student guidelines* (Benchmark 32, *Student Support*) is 'business as usual' for any HEI and a basic level of provision is easily achieved with static web pages; however, improvement in terms of accuracy, scope and ease of use by students may still be worth the effort. Situations like this could lead to a benchmark being rated as unproblematic in self-assessments, yet still attracting actions for further improvement.

A similar pattern is seen with *Interactivity* (Benchmark 14, in *Curriculum Design*) and *Range of e-learning tools* (Benchmark 22, in *Course Delivery*). Improvements here are core concerns for many e-learning practitioners who wish to move away from e-learning as transmissive content delivery to something that better uses the

affordances of the medium. It is perhaps not surprising that they should seek to improve quality in these areas even if current provision is not seen as problematic.

There could also be benchmarks where there are issues highlighted as problematic in a self-assessments that are not yet widely acknowledged by the institution and where no plans have yet solidified that can be committed to a roadmap. *Social media* (Benchmark 33, in *Student Support*) may be one example. In this specific case, it may be that institutions have held back from actions in a fast-moving area, particularly as during the period covered by these reviews there was a shift from the provision of 'walled garden' institutional social spaces to public sites such as Facebook.

More worrying would be to see evidence of issues frequently assessed as problematic, but for which few improvement actions are planned; there is little evidence of this in the current data.

There are limitations to the work presented here. The data comes from a relatively small number of reviews and it is therefore not possible to gain a sense of whether issues have changed over time, or whether the issues faced by different categories of HEI might differ. There also seems to be considerable variation in the way institutions portray themselves in self-assessments: at the extremes, one HEI rated 28 of 35 benchmarks as problematic and another rated none. External reviewers may note in their report where they feel self-assessments are unrealistic, but the data presented here has taken the self-assessment scores at face-value since we are not attempting to compare different institutions. It is tempting to speculate on what might lead an institution to overvalue or undervalue its e-learning provision. There is a mix of internal and external pressures at play: for example, judging aspects 'excellent' may present the institution in a good light externally, but internally may undermine any call for investment in further improvements.

Ossiannilsson et al. (2015) reviewed a number of quality frameworks for e-learning. They found that most reflected a similar range of concerns which could be considered under three very broad headings (Services, Products and Management), but that these could also be viewed in the six areas used by E-xcellence. This suggests that, although the work here is framed in terms of E-xcellence, it is of broader applicability. It also suggests there would be value in future work that combines data from several frameworks.

6. Conclusion

An E-xcellence self-assessment and review is an opportunity for an institution to take stock of its e-learning provision, recognise its strengths and weaknesses, and plan actions that will enhance its quality of provision. The E-xcellence process results in a 'holistic' view of quality. This encompasses, but goes beyond, the quality of the individual e-learning resources, which is only one aspect of the whole. To achieve high quality outputs, an institution should strive for processes that are well designed and well implemented.

This paper, by looking at evidence from past E-xcellence reviews, suggests that HEIs introducing e-learning have faced challenges in broad areas of Strategic Management, Curriculum Design and Staff Support. The areas of Course Design and Course Delivery – where attention might be directed if taking a narrow view of the quality of individual learning resources – are seen as less problematic.

At a more detailed level, particular issues are managing staff workload, developing an institutional strategy for e-learning, and building an online academic community for students. The provision of reliable IT systems and hardware is unproblematic. Many HEIs are also planning actions to improve the interactivity of learning resources and to increase the range of e-learning tools provided by their institutional VLE.

In summary, this study has given a picture of the issues that have proved to be challenging for HEIs moving into e-learning. We hope this will be of use to other HEIs, and educational policy makers more generally.

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